

Listing of Claims:

1. (Currently Amended) A transmission line type noise filter connectable between a direct current power supply ~~(70)~~ and an electrical load component ~~(80)~~ for passing a coming DC current while attenuating a coming AC current, said transmission line type noise filter comprising:

a first conductor ~~(11)~~ formed in a plate shape and having a length ~~(L)~~ along a first direction ~~(X)~~ parallel to a transmission line, a width ~~(W)~~ along a second direction ~~(Y)~~ perpendicular to said first direction ~~(X)~~, and a thickness ~~(t)~~ along a third direction ~~(Z)~~ perpendicular to said first and said second directions ~~(X, Y)~~;

a dielectric layer ~~(30)~~ formed on said first conductor ~~(11)~~;

a second conductor ~~(20)~~ formed on said dielectric ~~(30)~~;

a first anode ~~(12)~~ connected to one end portion of said first conductor ~~(11)~~ in said first direction ~~(X)~~ for connecting said first conductor ~~(11)~~ to the direct current power supply ~~(70)~~; and

a second anode ~~(13)~~ connected to the other end portion of said first conductor ~~(11)~~ in said first direction ~~(X)~~ for connecting said first conductor ~~(11)~~ to the electrical load component ~~(80)~~;

said second conductor ~~(20)~~ serving as a cathode connectable to a standard potential;

25 said first and said second conductors ~~(11, 20)~~ and said dielectric layer ~~(30)~~ providing a capacitance forming portion ~~(50)~~; and

30 said thickness ~~(t)~~ of said first conductor ~~(11)~~ being selected to substantially restrict temperature elevation of said first conductor ~~(11)~~ caused by DC current flowing in said first conductor ~~(11)~~.

2. (Currently Amended) The transmission line type noise filter according to claim 1, wherein said first conductor ~~(11)~~ ~~is made essentially of~~ comprises valve-operational metal and said dielectric ~~(30)~~ ~~is made of~~ comprises an oxidized film of said valve-operational metal.

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3. (Currently Amended) The transmission line type noise filter according to claim 2, wherein said valve-operational metal is aluminum, and wherein said thickness ~~(t)~~ of said first conductor ~~(11)~~ is 2.0 mm or less.

4. (Currently Amended) The transmission line type noise filter according to claim 2, wherein said valve-operational metal is tantalum, and wherein said thickness ~~(t)~~ of said first conductor ~~(11)~~ is 1.5 mm or less.

5. (Currently Amended) The transmission line type noise filter according to claim 2, wherein said valve-operational metal is niobium, and wherein said thickness ~~(t)~~ of said first conductor ~~(11)~~ is 1.0 mm or less.

6. The transmission line type noise filter according to claim 1, wherein said first conductor ~~(11)~~ and said first and said second ~~anode (12, 13)~~ anodes are integrally formed in ~~a form~~ of a metal sheet.